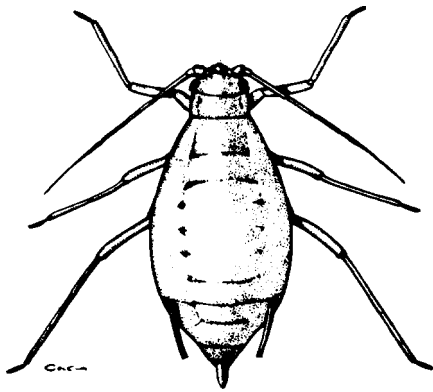


PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

Fruit IPM

Dean Polk, IPM Agent, Fruit



◆ Peach

Oriental fruit moth (OFM): Timings for first generation treatments have passed in all southern counties. The second spray for OFM in central counties should be applied now (5/25-26). Timings for the second first generation spray in northern counties will be as follows: Hunterdon Co. - 5/28, Warren Co. - 5/31-6/1. After initial treatments for the first generation have been applied, sprays for later generations should be geared to trap peaks and/or if trap counts exceed 6 to 8 male moths per trap per week.

Green peach aphids (GPA): Where aphid colonies are present, winged forms are starting to appear. This is one indication that GPA are starting to move from peaches to alternate host sites. This means that aphid populations should start to decrease in the very near future. Tolerating a few colonies here and there is a wise move at this point, especially if aphicides have already been applied.

Catfacing Insects: Catfacing pressure is spotty. If no tarnished plant bugs or stink bugs are present (or very low numbers), and OFM sprays have already been applied, then insecticide applications can be stretched, or insecticide omitted from the next middle. In some areas stink bugs are being found in the tree canopy. Insecticides cannot be omitted in this situation.

Bacterial spot: Bacterial spot is at moderate levels on sensitive varieties and nectarines in southern counties. The disease has also been seen on farms in Morris and Bergen Counties. Infections in northern counties are rare, and usually indicate a favorable year for spread of this disease. Growers who are not already applying Mycoshield or Tenncop sprays for bacterial spot on sensitive varieties should do so.

◆ Apple

Tufted apple budmoth (TABM): The first TABM trap catches (biofix points) have now been established for all areas of the state. Tufted apple budmoth is a leafroller, but feeds on both the foliage and the fruit. Larvae overwinter in old fruit or rolled leaves. They pupate in early to mid April through early May, and emerge as adults by mid to late April or early May. The first adult flight lasts through most of June. There are two generations per year, with the most severe feeding coming from the second generation. Insecticides are most effective when targeted at the young larvae as they hatch from eggs laid on the upper leaf surface. Research at Penn State in Biglerville has shown that alternate middle

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insecticide sprays should be applied starting at 0-5% egg hatch (about 490 DD after biofix), 25-30% egg hatch (about 625 DD), 50-55% egg hatch (about 763 DD), and at 75-80% egg hatch (about 898 DD). Additional sprays will be needed to control the second generation in August. Use at least 50 gal of spray volume per acre. If conditions are severe, use at least 100 gal or more per acre.

Due to bee toxicity, PennCap is no longer a wise choice in many areas of the state. Under anything but extremely high pest pressure, use of Lannate and pyrethroids are also not suggested, since these products will build mite populations when used early in the season. Under normal conditions, Guthion 50W @.5-.75 lb/A plus Lorsban 50W @1-1.5 lb/A will suppress first generation populations. Lorsban alone @2-3 lb/A may also be used, and will suppress aphid and mite populations when used in repeated applications, especially with spreaders and low rates of oil. Use of Lannate should be saved for the second generation (August) where possible. Growers in the western-southwestern counties normally experience higher TABM pressure. If damage was sustained last year, and if early season miticides were applied in these orchards, Lannate (LV) @1.5-2 pt/A may be combined with another insecticide.

Codling moth: Sprays should be applied around 5/29 in Cumberland County, and 5/28-29 in Gloucester County. Pest pressure is extremely low at the scouted sites in the Hammonton area, but sprays should be applied here several days later. Treatments in other counties should be timed for: 6/1-2 in central counties, and 6/5-8 in Hunterdon and Warren Counties.

Rosy apple aphids (RAA): RAA colonies are still present in a few areas. No more than 1 colony per tree should be tolerated. Any aphids that are present at this time of year are those that escaped pre-bloom aphicides. While rescue treatments are difficult for this

insect, one farm was seen last week where Provado @ 6 oz/A gave almost 100% control of established colonies in tightly curled leaves. Cygon @ 3 pt/A will also give satisfactory control.

Spotted tentiform leafminer (STLM): Mines are present at very low levels in some blocks. Larvae are in the sap feeding stage in most blocks. Occasional tissue feeders are present. After initial treatments have been applied, the decision to treat leafminers is based on the number of mines (larvae) infesting the average leaf. Timing is based on the stage of the larvae, where the majority of live larvae must be emerging or young sap feeders, and assisted by pheromone trap catches. During the summer months, the greatest number of sap feeding larvae can usually be found 7 to 10 days after peak adult catch. *No scouted orchards require treatment for STLM at this time.*

Apple scab: The last wetting period started on Saturday evening and lasted through early Monday morning in most areas of the state. This was a severe scab infection period, accompanied by 1.4 to over 2.0" of rain. This was enough precipitation to wash off most fungicide protection. Fungicides should be reapplied as soon as possible. If no fungicides are applied until after the next infection period, SI materials will be required to attain "reach back" action.

Powdery mildew: Several additional sites were seen this past week with powdery mildew symptoms. Win Cowgill reports mildew on ginger gold and other fresh market varieties in northern counties. SI materials, including Bayleton are the premium mildew materials which may be used in fresh market fruit. For less expensive (and less active materials) see last newsletter.

◆ **Blueberry**

Leafrollers and other Leps: Sampling showed that of 71 samples taken, only 20 samples showed signs of leafroller, spanworm, fruitworm, or gypsy moth activity. Again, most larvae were green fruitworm and spanworms. Only one sample (in the Hammonton area) was

above treatment threshold at 1.5 larvae per 100 blossom clusters. (The treatment threshold is 1 larva per 100 blossom clusters.) Two other samples were bordering treatment level.

Cranberry fruitworm (CBFW): CBFW trap catches increased this past week. However trap peaks have not yet been reached. Applications of insecticide for this pest are premature at this point.

SEE **BLUEBERRY** ON PAGE 3

Tree Fruit Pest Degree Day Accumulations Since 1 st Catch - 5/20/96						
Site	Biofix/1 st Catch Date & DD - OFM		Biofix/1 st Catch Date & DD - TABM		Biofix/1 st Catch Date & DD - CM	
Hammonton - At. Co.	3/25	606	5/2	324	5/9	168
Hardingville - Glou. Co.	3/30	560	4/30	354	4/30	236
Bridgeton - Cumb. Co.	4/7	507	5/1	349	5/2	221
Princeton - Mercer Co.	4/17	409	5/12	206	5/5	169
Oldwick - Hunt. Co.	4/21	376	5/17	129	5/16	88
Hackettstown - War. Co.	4/28	318	5/22	63	5/9	133
Spray target after biofix/1st catch	200, 400 DD after biofix (1 st generation)		Alt Mid Appl. at 490, 625, 763, 898 (1 st brood), and 2228, 2415, 2605, 2795 (2 nd brood)		250 DD plus 2 weeks later (1 st generation), 1250-1300 DD plus 2-3 weeks later (2 nd generation)	

Trap Averages

South Jersey Tree Fruit

Week Ending	RBLR	STLM	TBM-A	CM	AM	OFM	TBM-P	LPTB	PTB
4/5	293.0	2650	—			3.56			
4/11	271.5	983	—			16.0			
4/18	168.0	845	0.00			13.77			
4/25	46.8	808	0.00			27.0			
5/2	30.8	885	0.06	0.04	—	56.9	0.08	—	—
5/9	25.3	1177	4.5	1.0	—	39.5	3.0	—	—
5/16	7.0	822	30.2	2.6	—	12.9	50.6	0.7	—
5/23	2.8	478	33.8	9.3	—	18.0	39.1	27.4	—

North Jersey Tree Fruit

Week Ending	RBLR	STLM	TBM-A	CM	AM	OFM	TBM-P	LPTB	PTB
4/25	34	255	—			.75			
5/2	40.2	1080	0.0	0.01	—	3.3	0.0	—	—
5/9	22.2	980	0.0	0.3	—	26.2	0.0	—	—
5/16	10.7	902	1.0	1.3	—	6.0	0.1	0.1	—
5/23	2.0	157	1.9	1.2	—	4.1	0.6	0.9	—

Blueberry

Atlantic Co.

Week Ending	RBLR	OBLR	CBFW	SNLH	BBM
4/5	120.1				
4/11	163.7				
4/18	133.0				
4/25	157.7				
5/2	107				
5/9	27.5	0	0	—	—
5/16	7.4	0	0.5	—	—
5/23	1.5	0	2.6	—	--

Burlington Co.

Week Ending	RBLR	OBLR	CBFW	SNLH	BBM
4/5	32.0				
4/11	60.0				
4/18	51.0				
4/25	43.0				
5/2	33.4				
5/9	14.0	0.2	0	—	—
5/16	5.6	0	0.3	—	—
5/23	1.8	0	0.9	—	—

BLUEBERRY FROM PAGE 2

Aphids: Aphids increased slightly since last week. While 10% of our samples showed aphid activity 2 weeks ago, 20% of the samples showed activity this past week. While most aphids were still found as single insects, colonies were beginning to form in isolated sites. One site in Burlington County had 23% of growing terminals infested, including some small colonies of adults and immatures. Reproduction is well underway, so populations should be increasing in the near future. This is illustrated by the mixed stages that were seen, and the fact that close to twice as many infested samples were seen this past week compared to the previous week □

Ribes

*Jerome L. Frecon,
Gloucester County Agricultural Agent*

Ribes: A new publication, Currant and Gooseberries Culture Guide is now available. This publication is authored by two Agronomists from Quebec, Monique Audette, Manager, Frelighsburg Experimental Orchard and Michel Lareau, Fruit Crops Management. This is an up-to-date resource document and will be of great value to anyone planting or planning to plant ribes.

To obtain this publication in the USA, it can be ordered from:

The International Ribes Association (TIRA)
Box 428
Boonville, CA 95415
Phone: 707-895-2811
Cost \$10.00 US includes postage and handling. □

Price Look Up (PLU) Stickers on Fruit

Jerome L. Frecon, Gloucester County Agricultural Agent

Many of the fruit varieties sold in supermarkets have PLU stickers. These stickers have a code which is scanned at the check-out counter to identify the product and automatically input the price. The retailer can then avoid pricing errors and speed up the check-out process.

Hopefully the process will result in more variety of size of each fruit type (apples, peaches, etc.). Unfortunately, the implanting of these stickers is done in the grower/shippers packing house. The stickers and equipment are sold by various companies with all the codes. Equipment can run from large, expensive "inline" stickering equipment to small hand held units. At our meeting at Mt. Pleasant Orchards in Richwood on Wednesday, one type of equipment for the small grower will be demonstrated. Others are available.

Will growers need to sticker their fruit in 1997? It depends on who you talk to. Each retailer has different requirements. However, it appears much of our competition from California and Georgia are now doing this. So even though it will cost more in the future it may be necessary to make a sale. □

Fruit Meeting Calendar

June 5, 1997 - "Cream Ridge Strawberry Plasticulture and Breeding Field Day, 1:00 p.m., Rutgers Fruit Research & Extension Center, 283 Route 539, Cream Ridge, NJ 08514. Contact: Dr. Joe Fiola (609-758-7311).

June 22-24, 1997 - "International Dwarf Fruit Tree Summer Orchard Tour", Leominster, Massachusetts. Contact: Mr. Charles Ax, 14 South Main Street, Middleburg, PA 17842, 717-837-1551.

June 25-26, 1997 - "State Horticultural Association of Pennsylvania Summer Educational Orchard Tour"— Orchards in Berks County, PA (approx. 65 miles from Southern NJ). Contact: Maureen Irvin, 697 Mountain Road, Ortana, PA 717-677-4184. Call to register by June 2.

Late Apple Thinning Considerations

Winfred P. Cowgill, Jr., Hunterdon County Agricultural Agent

Most apple varieties are past petal fall in North Jersey. In Hunterdon County most apples have set well following a long extended bloom. The exceptions are spur red delicious, Stayman and Macintosh. Two freezes during bloom hurt these varieties. In three orchards I visited since Friday, all reds have set very light and will require no additional thinning. Staymans have been hurt the most. In most cases no thinning needs to be done at all on these cultivars. You can tolerate some doubles on Reds if the crop is light overall. You will need to evaluate your apples by cultivar block by block.

For the most part growers have applied one or two applications of chemical thinners already. We are now in the late Fruit Set Phase of development where the fruitlets range from 12-20MM in size. They are now showing strength and you can tell which fruitlets will remain on the tree. This larger fruit is much harder to thin at this point.

The sunny conditions the past two days and warm temperatures have caused the fruitlets to jump in size.

In Hunterdon County (Pittstown) on Monday, 5/26 fruit sizes were the following:

- Liberty 14-15MM
- Empire 12-14MM
- JonaGold 12-14MM
- Red Chief Red Delicious 10MM

Warren County (Hackettstown) Tuesday 5/27:

- Stayman 9MM
- Macintosh 10-11MM
- Starking Red Delicious 10-10.5MM
- JerseyRed 11-12MM

Sevin, NAA, Vydate, Accel and Ethepon are labeled for late fruit set application up to 20MM. At this stage combinations will work best to further reduce fruit set. On small fruited cultivars like Empire and Gala, you want to reduce the crop load to at least one fruit per spur. For maximum size, crop load on these cultivars must be reduced even further so that some spurs have no fruit. On Gala, all fruit that set on the one year old wood should be eliminated, it will be smaller than fruit born on the two year old wood.

Combinations that have worked well:

- Sevin XLR-Plus (1 Quart 100 gal) with NAA (15-20 ppm)
- Vydate L with NAA
- Ethepon with NAA

There are two companies (Micro Flo and Rhone-Poulenc) that have Ethrel formulations for apple thinning; both have 21.7% active ingredient Ethepon.

MicroFlo's label reads for golden delicious apples while the Rhone-Poulenc formulation has all apples on the label. Ethrel is labeled at 1.5-4 pints per acre, less if used in combinations. Consult the label carefully.

Ethepon has also been used successfully in Virginia as a rescue treatment for thinning up to 20MM in size when weather conditions have not allowed for any or adequate thinning with other materials. □

Weather Summary for Week Ending 5/26/97

Keith Arnesen, Agricultural Meteorologist

Temperatures averaged much below normal. Extremes were 92 degrees at Toms River on the 20th and 30 degrees at Long Valley on the 22nd. Weekly rainfall averaged 0.83 inches North, 2.08 inches Central, and 1.21 inches South. The heaviest 24 hour total was 2.50 inches at Long Branch on the 25th to 26th. Estimated soil moisture, in percent of field capacity, this past week averaged 82 percent North, 62 percent Central and 60 percent South. Four inch soil temperatures averaged 54 degrees North, 59 degrees Central and 60 degrees South.

The following table contains meteorological information since the start of the growing season March 1st. The table is updated each Monday and the following is an explanation for each column.

Week=total rainfall for the previous 7 days ending Monday morning

Total=total rainfall since March 1st

Dep=departure from normal of rainfall since March 1st. A negative sign indicates below normal and no sign indicates above normal.

Mx=highest temperature for that 7 day period

Mn=lowest temperature for that 7 day period

Avg=average temperature for that 7 day period

Dep=departure from normal of the average temperature for that 7 day period

Total=total number of growing degree units since March 1st

Dep=departure from normal of growing degree units

%FC=percent of field capacity (soil moisture)

Weather Summary for the Week Ending 8 a.m. Monday 5/26/97										
WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
BELVIDERE BRIDGE	1.04	9.38	-1.42	78	43	58.	-4	179	-88	89
CANOE BROOK	1.41	10.26	-1.67	85	43	60.	-2	299	57	94
CHARLOTTEBURG	.84	12.66	.91	79	40	57.	-3	161	2	80
FLEMINGTON	.61	10.87	-.44	69	34	53.	-10	194	-63	80
LONG VALLEY	.72	11.35	-.82	70	30	51.	-9	161	-30	87
NEWTON	.38	9.51	-.95	66	36	51.	-10	97	-98	77
FREEHOLD	.00	.00	.00	0	99	0.	0	0	0	0
LONG BRANCH	2.50	11.70	.06	88	44	61.	-2	300	28	100
NEW BRUNSWICK	2.09	13.03	1.95	86	43	59.	-5	288	-55	100
PEMBERTON	2.15	12.27	1.54	89	40	62.	-2	414	75	100
TOMS RIVER	1.72	10.78	-.48	92	40	60.	-3	295	0	100
TRENTON	1.95	12.13	1.93	85	38	59.	-6	289	-91	100
BRIDGETON	.00	.00	.00	0	99	0.	0	0	0	0
CAPE MAY COURT HOUSE	1.06	10.44	.55	89	43	63.	-1	367	30	66
DOWNSTOWN	.84	10.96	.81	89	42	61.	-4	335	-58	68
GLASSBORO	1.54	13.81	3.02	86	44	62.	-3	374	-3	100
HAMMONTON	1.79	11.99	1.49	90	42	61.	-4	329	-40	100
POMONA	1.55	11.90	2.09	91	39	62.	-2	350	37	100
SEABROOK	.63	12.45	3.16	88	46	63.	-2	369	-29	61
ATLANTIC CITY MARINA	1.05	8.28	-.99	79	47	62.	-1	339	41	80
WOODSTOWN	0.26	11.03	.46	90	40	63.	NA	388	NA	NA

Cream Ridge Strawberry Plasticulture and Breeding Field Day

Thursday, June 5, 1997, 1:00 p.m.

Rutgers Fruit Research and Extension Center, 283 Route 539, Cream Ridge, NJ

- ❖ Plasticulture Research Plot Tours
- ❖ Eastern Variety Trials
- ❖ Organic Nutrition
- ❖ Runner Removal
- ❖ Vegetable Double Cropping
- ❖ NJAES Strawberry Breeding and Variety Showcase
- ❖ Plasticulture and Matted-row
- ❖ Field Equipment Demonstrations
- ❖ Weed, Disease and Insect Diagnostics

For further information, contact Dr. Joseph Fiola, Specialist in Small Fruit and Viticulture, (609) 758-7311.

New Brunswick, N.J. 08903-0231
Cook College
P.O. Box 231

Rutgers Cooperative Extension - NJAES
U.S. DEPARTMENT OF AGRICULTURE
Rutgers - The State University of New Jersey

PLANT & PEST ADVISORY

FRUIT EDITION - CONTRIBUTORS

RCE Specialists

Robert Belding, Ph.D., Pomology
Joseph A. Fiola, Ph.D., Small Fruit & Viticulture
Norman Lalancette, Ph.D., Plant Pathology
Bradley A. Majek, Ph.D., Weed Science
Peter Oudemans, Ph.D., Plant Pathology
Sridhar Polavarapu, Ph.D., Entomology
Peter W. Shearer, Ph.D., Entomology
Craig A. Storlie, Ph.D. Agricultural Engineering

NJAES/Cook College

Joseph Goffreda, Ph.D., Breeding
Edward Durner, Ph.D., Plant Physiology
RCE County Agricultural Agents and Program Associates
Gloucester, Jerome L. Frecon (609-863-0110)
Hunterdon, Winfred P. Cowgill, Jr. (908-788-1338)
Morris, Peter J. Nitzsche (201-285-8300)
Warren, William H. Tietjen (908-475-6505)
Cream Ridge, Dean Polk (609-758-7311)
 Ken Petersen, Program Associate (908-788-1338)
 Gene Rizio, Program Associate (609-784-1001)
 David Schmitt, Program Associate (609-863-0110)

Newsletter Production

Jack Rabin, Assistant Director, NJAES
Cindy Rovins, Editor and Designer

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